

Amendments to the Claims

1. (Currently Amended) A cooling method of a metal part by immersing the heated metal part in a cooling liquid, ~~characterized in that by applying a repeatedly varying pressure to a vapor film which is formed when the cooling liquid vaporizes on a surface of the metal part, the vapor film is broken without the stirring of the cooling liquid.~~ comprising the step of:

applying a repeatedly varying pressure to a vapor film formed when the cooling liquid vaporizes on a surface of the metal part, wherein the vapor film is broken without the stirring of the cooling liquid.

2. (Currently Amended) The cooling method of a metal part according to claim 1, ~~characterized in that a~~ wherein the step of repeatedly varying pressure is applied to the vapor film ~~by~~ includes the step of applying oscillations to the cooling liquid.

3. (Currently Amended) The cooling method of a metal part according to claim 1, ~~characterized in that a~~ wherein the step of repeatedly varying pressure is applied to the vapor film ~~by~~ includes the step of changing a liquid-level pressure of the cooling liquid.

4. (Currently Amended) The cooling method of a metal part according to claim 1, ~~characterized in that a~~ wherein the step of repeatedly varying pressure is applied to the vapor film ~~by~~ includes the steps of combining applying oscillations to the cooling liquid and changing the liquid-level pressure of the cooling liquid.

5. (Currently Amended) The cooling method of a metal part according to claim 2 ~~or 4~~, ~~characterized in that~~ wherein the step of applying oscillations ~~applied~~ to the cooling liquid ~~are given by~~ includes the step of using multiple oscillators.

6. (Currently Amended) The cooling method of a metal part according to ~~any one of claims 2, 4 and 5~~ claim 2, ~~characterized in that~~ further includes the step of adjusting at least either of the amplitude and frequency of the oscillations ~~is adjusted~~ according to the thickness of the vapor film.

7. (Currently Amended) The cooling method of a metal part according to ~~any one of claims 2, 4 and 5~~ claim 2, ~~characterized in that further including the step of adjusting~~ at least either of the amplitude and frequency of the oscillations ~~is adjusted~~ according to the condition of the cooling liquid.

8. (Currently Amended) A cooling method of a metal part according to ~~any one of claims 1 to 7~~ claim 1, ~~characterized in that~~ further comprising the step of stirring the cooling liquid is ~~stirred~~ after the vapor film begins to be broken and wherein bubbles formed by the breakage of the vapor film are caused to diffuse in the cooling liquid.

9. (Currently Amended) The cooling method of a metal part according to claim 8, ~~characterized in that~~ further comprising the step of adjusting at least either of the intensity of the stirring and the direction of a flow generated by the stirring ~~is adjusted~~ according to the condition of the cooling liquid and the condition of the metal part in the cooling liquid.

10. (Original) A method of manufacturing a metal part, characterized in that the manufacturing method comprises a step of heating a metal part and a step of cooling the metal part after the heating thereof by immersing the metal part in a cooling liquid, and in that in the cooling step, by applying a repeatedly varying pressure to a vapor film which is formed when the cooling liquid vaporizes on a surface of the metal part, the vapor film is broken without the stirring of the cooling liquid.

11. (Original) A cooling apparatus for a metal part, characterized in that the cooling apparatus comprises means for cooling a metal part after the heating thereof by immersing the metal part in a cooling liquid, and in that the cooling apparatus applies a repeatedly varying pressure to a vapor film which is formed when the cooling liquid vaporizes on a surface of the metal part, and breaks the vapor film without the stirring of the cooling liquid.